

Application N . 10/070,565

Docket No. HHI-039US

REMARKS

Claims 1-2 are pending in the application. Claims 1-2 are rejected. Claim 1 is amended herein. Entry of this amendment and reconsideration and allowance of all pending claims are requested in view of the remarks below.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Lester. Applicant traverses this rejection.

Applicant asserts that Lester does not teach a device having one of the two walls that is movable into the mold configured to partially determine the surface shape of the casting, as recited in claim 1. Lester does not appear to teach such a configuration, as the plungers 15 and 17 are in communication with a metering cavity 20, and the metering cavity 20 does not appear to extend to the mold cavity 16, see Figures 1 and 2 of Lester. With reference to Lester at column 3, lines 52-60, and shown by positions A and E in Figure 1, it does not appear that Lester provides a movable wall configured to partially determine a surface shape of the casting, at least because the plungers 15 and 17 do not contact the mold cavity 16. Applicant submits that portions of the charge outside the mold cavity 16 do not form part of the casting, as they are considered sprue.

In view of the above, Applicant submits that Lester is unable to sustain a rejection of claim 1. While Applicant submits that claim 1 is patentable over Lester, Applicant further

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provides an amendment to claim 1 to specify that the two movable walls are located such that sprue is avoided. Support for this amendment can be found in the specification, such as, for example, at page 4, lines 12-15. Applicant requests entry of this amendment, asserting that no new search is required, as it appears that the Examiner has already considered that the portion of the charge in Lester formed in the space between the wall of plunger 15 in position E and the wall of plunger 17 in position A may not be considered to be a casting, see numbered paragraph 4 on page 2 of the Office Action. Accordingly, Applicant requests entry of this amendment.

Applicant directs the Examiner to the specification at page 4, beginning at line 6. As noted in the specification, the sprue point can be displaced into the casting to avoid sprue. As noted in Lester at column 3, lines 52-60, and shown at positions A and E in Figure 1, it does not appear that Lester avoids sprue, as a portion of the charge appears to remain within the metering cavity 20. Therefore, Applicant submits that claim 1 is patentable over Lester. Claim 2 is patentable at least by way of its dependency from claim 1.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-2 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Lester and further in view of CH 661,883 and vice versa. Applicant traverses this rejection.

The Examiner's reasoning for holding obvious the claimed invention in view of the prior art appears to be based, not on knowledge generally available from the prior art but, rather, on the Applicant's own disclosure of problems existing in prior art devices and the Applicant's

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solution thereof. The Office Action asserts, without reference to any specific portion of CH 661, 883, that the reference "shows to use one of the two opposed pistons to define a part of mold cavity such that to eliminate the use of sprue and thereby simplifying the die design." Applicant disputes that this is apparent from the drawings and requests a translation of the portion of the text of the foreign language CH '883 reference from which the Examiner relies.

The Office Action continues, asserting that "it would have been obvious to use one of [sic] piston to define the mold cavity as taught by CH '883 in the apparatus of Lester in view of the advantage." Applicant disputes this, noting that the references provide no such teaching.

Mere allegations by the Examiner, that the claimed subject matter is obvious in view of the prior art, do not create a presumption of unpatentability. *In re Soli*, 317 F.2d 941, 137 USPQ 797 (CCPA 1963). It is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). This burden can only be satisfied by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. *In re Lahu*, 747 F.2d 703, 223 USPQ 1257 (Fed. Cir. 1984).

Here, there is no clear reasoning regarding the details of any simplification of the die design "advantage" allegedly taught by CH '882 and how it would be obvious to modify Lester with one piston to "define the mold cavity" and/or how this would avoid sprue. As noted in Lester at column 3, lines 52-60, and shown in Figure 1, it does not appear that Lester avoids sprue, as a portion of the charge appears to remain within the metering cavity 20 because of the locations of both plungers 15, 17, as positions E and A, respectively. Therefore, sprue would

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remain even if one piston of Lester were somehow completely reconfigured to "define the mold cavity." To properly combine references, an objective teaching leading to the combination must be shown. *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999). "The showing must be clear and particular.... Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *Id.* In view of the above, Applicant submits that the rejection of claim 1 over Lester and further in view of CH 661,883 is overcome. Claim 2 is patentable at least by way of its dependency from claim 1.

With regard to CH 661,883 further in view of Lester, the Office Action notes that it would also be "obvious to use the two opposed pistons movable within the chamber of injection cylinder for varying the volume of the molten metal for casting different castings as taught by Lester in the apparatus of CH '883 in view of the advantage." Applicant traverses this assertion, noting that no specific "advantage" is noted in the Office Action with regard to this assertion of obviousness. Furthermore, Applicant notes that CH '883 does not appear to have a metering cavity 20 as used by Lester, as the area 3 in which the charge of CH '883 is poured is not illustrated as a closed area, see Figure 1. As shown in Figure 2, the pouring is illustrated as stopped with a seemingly arbitrary level of charge in area 3. The Office Action provides no reasoning, nor any reference to the references themselves, how it would be obvious for one of ordinary skill in the art to modify CH' 883 by the disclosure of Lester. Therefore, Applicant submits that the rejection of claims 1 and 2 in view of CH 661,883 and further in view of Lester should be withdrawn.

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Conclusion

In view of the remarks set forth above, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at (617) 227-7400.

Respectfully submitted,

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